

IT2705 is a highly integrated modular DC power analyzer designed for dynamic power consumption measurement, battery simulation, and power characterization. It integrates a DC power supply, regenerative load, arbitrary waveform generator, oscilloscope sampling, and data logging functions, featuring a graphical user interface that enables complex test sequences without the need for secondary development.

The IT2705 supports flexible combinations of multiple functional modules, including DC sources, bidirectional sources, regenerative loads, and SMU modules, with single-module power ranging from 20W to 500W, and up to 8 channels configurable. It is ideal for applications such as IoT devices, chip power supply testing, automotive electronics, and wearable technology. The IT2705 empowers engineers to deeply analyze startup waveforms, transient responses, and power consumption characteristics, thereby enhancing both test efficiency and measurement accuracy.



- Supports 20 types of modules (including DC sources, regenerative loads, bidirectional sources, and SMU modules)
- Up to 8 modules can be installed, with independent control and full channel isolation
- Supports two sets of “master-slave parallel” configuration, enabling effortless power range extension \*1
- Graphical operation interface with guided menus for greatly enhanced usability
- Integrates multiple functions, including LIST mode, sequence output, battery testing/simulation, arbitrary waveform customization, and sine sweep
- Internal Ah/Wh statistics with automatic calculation of regenerative energy
- Flexible display modes: Meter / Scope / Data Logger
- Oscilloscope mode with a sampling rate up to 200 kHz
- Data logging with a minimum sampling interval of 20 $\mu$ s
- Web control support, enabling full function operation through a standard web browser
- Standard interfaces: USB / LAN / CAN / Digital I/O, with free control software PV2700 included

\*1 The IT27814E module supports parallel operation only in CC mode

Rated value	Voltage	-20V~20V		
	Current	-3A~3A		
	Power	-20W~20W		
	Series internal resistance (CV Priority)	-0.04Ω~1Ω		
Setup Resolution	Voltage	6V range	210uV	
		20V range	700uV	
	Current	10mA range	1uA	
		100mA range	10uA	
		3A range	300uA	
	Series internal resistance (CV Priority)	6V range	0.5mΩ	
		20V range	0.5mΩ	
	Read Back Resolution	Voltage	6V range	210uV
20V range			700uV	
Current		10uA range	1nA	
		1mA range	100nA	
		100mA range	10uA	
		3A range	300uA	
Setup Accuracy		Voltage	6V range	0.02% + 1mV
			20V range	0.02% + 3 mV
	Current	10mA range	0.05% + 6uA	
		100mA range	0.05% + 50uA	
		3A range	0.05% + 1.5mA	
	Series internal resistance (CV Priority) (1)	6V range	0.1% + 1.5 mΩ	
		20V range	0.1% + 3 mΩ	
	Read Back Accuracy	Voltage	6V range	0.02% + 1mV
20V range			0.02% + 3 mV	
Current		10uA range	0.05% + 8 nA	
		1mA range	0.05% + 400 nA	
		100mA range	0.05% + 40 μA	
		3A range	0.05% + 1.2 mA	
Voltage ripple		Vpeak		≤12mVpp

	Vrms		$\leq 1.2\text{mV}$
Transient Response Time (2)	Voltage	6V range with a 1.4A load step	$\leq 55\ \mu\text{s}$
		20V range with a 0.8A load step	$\leq 40\ \mu\text{s}$
Load Regulation	Voltage <sup>(3)</sup>	6V range	$600\ \mu\text{V}$
		20V range	$2\text{mV}$
	Current	10mA&100mA range	$3\ \mu\text{A}$
		1A range	$200\ \mu\text{A}$
		3A range	$400\ \mu\text{A}$
Output protection	OCP		$-3.06\text{A}\sim 3.06\text{A}$
	OVP		$-20.4\text{V}\sim 20.4\text{V}$
Remote Sense Compensation Voltage	$< 2\text{V}$		
Isolation DC to GND	600Vdc		
Working Temperature	$0\sim 40^{\circ}\text{C}$		
Storage Temperature	$-10^{\circ}\text{C}\sim 70^{\circ}\text{C}$		
IP	IP20		
Cooling	Air		
Dimension (mm)	320mm*104mm*40.5mm		
Weight( net)	0.95kg		

Note:

(1) The voltage/current input is no less than 0.1A.

(2) With  $150\ \mu\text{F}$  cap (ESR=50 m $\Omega$ ) at load, remote sensing at cap, the current rise time(10%-90%) is 10us, settling band is  $\pm 20\text{mV}/\pm 10\text{mV}$  under 6V/20V range.

(3) Under sense mode

This specification is for reference only and is subject to change without notice.